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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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			EXAMINER MARC COLEMAN, MARTHE Y	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/715,308	<b>Applicant(s)</b> GIBBS ET AL.	
	<b>Examiner</b> Marthe Y Marc-Coleman	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,12-16,18,20-30,32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-29 is/are allowed.
- 6) ☒ Claim(s) 1-7,12-16,18 and 30 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. This office action is in response to amendment filed on September 28, 2003.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 and 12-16, 18, and 30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett (U.S. Patent No. 5,416,705) in view of Nakhla (U.S. Patent No. 5,526,265).

In regard to claims 1, 2, and 33 Barnett discloses a method for entering data into an aircraft avionic flight management system having a computer means (**MCPU 30**) (see col. 2 lines 20-25) the computer means communicating with a monitor (**display 14, Fig. 3**) at least one data source (**storage 114**) and a text entry means (**keyboard 12, Fig. 2**) the method comprising:

- a. entering at least one alphanumeric character (see col. 4, lines 49-53; col. 5 lines 25-31 and col. 6 lines 14-16) corresponding to a first text identifier (text identifier is regarded as the command code in col. 2 lines 49-55 and col. 4 lines 48-52) into the text entry device and displaying the text entered on a flight plan entry field on the display (see col. 4 lines 34-37 and lines 48-52);

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- b. comparing the entered character to data stored in each data source and identifying and automatically completing on the monitor display a likely text identifier (data source corresponds to data from the keyboard and data from the storage) (see col. 2 lines 36-43 and col. 5 lines 18-26);
- c. repeating steps a and b until a desired first test identifier is displayed in the flight plan entry (see col. 5 lines 18-25).

Although Barnett discloses a likely text identifier as in col. 2 lines 42-43, Barnett fails to disclose identifying a likely text identifier **that is geographically closest to the aircraft's flight plan**. Barnett also fails to specifically disclose the step of accepting the text identifier by the text entry means if acceptable to an operator aircraft and allowing the computer means to modify the aircraft's flight plan corresponding to the accepted text identifier.

Nakhla discloses an alternate destination predictor for aircraft, wherein a likely text identifier that is geographically closest to the aircraft's flight plan is identified in col. 5 lines 16-24 and col. 6 lines 57-63. Nakhla further discloses the step of accepting the text identifier by the text entry means if acceptable to the aircraft operator and allowing the computer means to modify the aircraft's flight plan corresponding to the accepted text identifier (see col. 2 lines 17-27; lines 36-41 and Fig. 4).

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's nearest airport location

identification into Barnett's alphanumerical display and data entry method because it would facilitate a pilot to make a better informed decision regarding a route change in case of an emergency, thereby minimizing the probability of crashes due to miscalculated landing distance versus remaining fuel.

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's flight management modification with Barnett's test entry method because it would facilitate the pilot in the decision making process in case of an emergency by providing a list of alternate destinations at which the pilot can land the airplane.

**In regard to claim 3, Barnett discloses:**

- e. comparing the entered character to data stored in each data source and identifying and automatically completing on the monitor display a likely text identifier (data source corresponds to data from the keyboard and data from the storage) (see col. 2 lines 36-43 and col. 5 lines 18-26);
- f. repeating steps d and e until a desired additional text identifier is displayed in the flight plan entry field (see col. 5 lines 18-25).

Barnett fails to disclose entering at least one alphanumeric character corresponding to additional text identifiers into the text entry device and displaying the text entered on a flight plan entry field on the display; Barnett also fails to disclose identifying a likely text identifier that is **geographically closest to the aircraft's flight plan**. Nakhla discloses an alternate destination predictor

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for aircraft, having a step of entering at least one alphanumeric character corresponding to **additional text identifiers** into the text entry device and displaying the text entered on a flight plan entry field on the display (see col. 5 lines 17-29). Nakhla also discloses identifying a likely text identifier that is **geographically closest to the aircraft's flight plan** in col. 5 lines 16-24 and col. 6 lines 57-63.

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's nearest airport location identification into Barnett's alphanumeric display and data entry method because it would facilitate a pilot to make a better informed decision regarding a route change in case of an emergency, thereby minimizing the probability of crashes due to miscalculated landing distance versus remaining fuel.

**In regard to claim 30**, Barnett discloses a method for entering data into an aircraft avionic flight management system having a computer (**MCPU 30**) (see col. 2 lines 20-25) the computer communicating with a monitor (**display 14**) at least one data source (**storage 114**) and a text entry means (**keyboard 12**) the method comprising the steps of:

- a. entering at least one alphanumeric character (see col. 5 lines 25-31 and col. 6 lines 14-16) corresponding to a first text identifier (which corresponds to the command code in col. 2 lines 49-55 and col. 4 lines 48-52) into the text entry

- device and displaying the text entered on a flight plan entry field on the display (see col. 4 lines 34-37 and lines 48-52);
- b. comparing the entered character to data stored in each data source and identifying and automatically completing on the monitor display a likely text identifier (data source corresponds to data from the keyboard and data from the storage) (see col. 2 lines 36-43 and col. 5 lines 18-26);
- c. repeating steps a and b until all desired text identifiers are displayed in the flight plan entry field (see col. 5 lines 18-25).

Barnett fails to disclose identifying a likely text identifier that is **geographically closest to the aircraft's flight plan**. Barnett also fails to disclose entering at least one alphanumeric character corresponding to **additional text identifiers** into the text entry device and displaying the text entered on a flight plan entry field on the display. Furthermore, Barnett fails to disclose the step of accepting the text identifier by the text entry means if acceptable to the aircraft operator and allowing the computer means to modify the aircraft's flight plan corresponding to the accepted text identifier.

Nakhla discloses an alternate destination predictor for aircraft, wherein a likely text identifier that is geographically closest to the aircraft's flight plan is identified in col. 5 lines 16-24 and col. 6 lines 57-63. Nakhla also discloses entering at least one alphanumeric character corresponding to additional text identifiers into the text entry device and displayed the text entered on a flight plan entry field on the display (see col. 5 lines 17-29). Nakhla, further discloses the step of accepting the text identifier by the text entry means if acceptable to the aircraft operator and allowing the computer means

to modify the aircraft's flight plan corresponding to the accepted text identifier (see col. 2 lines 17-27; lines 36-41 and Fig. 4)

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's nearest airport location identification into Barnett's alphanumeric display and data entry method because it would facilitate a pilot to make a better informed decision regarding a route change in case of an emergency, thereby minimizing the probability of crashes due to miscalculated landing distance versus remaining fuel.

Furthermore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to implement Nakhla's flight management modification with Barnett's test entry method because it would facilitate the pilot in the decision making process in case of an emergency by providing a list of alternate destinations at which the pilot can land the airplane.

**In regard to claims 4 and 12,** Barnett discloses that at least one data source contains avionic data (see col. 3 lines 28-35).

**In regard to claims 5 and 13,** Barnett discloses that at least one data source contains navigational data (see col. 3 lines 28-35).

**In regard to claims 6 and 14,** Barnett discloses that the computer means is a microprocessor (see col. 8 lines 10-11).



In regard to claims 7 and 15, Barnett discloses that each text identifier is selected from the group consisting of airway data (navigation data in col. 5 lines 21-30), waypoint data (see col. 5 lines 28-30) and aircraft procedure data (or landing and destination data in col. 5 lines 21-30 also see Figs. 8 and 9).

In regard to claim 16, Barnett discloses a system for entering data into an aircraft avionic flight plan, the system comprising an aircraft management system (which correspond to the aircraft control and display apparatus in col. 2 lines 3-4) having a computer means (**MCPU 30**) (see col. 2 lines 20-25) the computer means communicating with a monitor (**display 14**) at least one data source (**storage 114**) and a text entry means (**keyboard 12**) the text entry means configured to accept at least one alphanumeric character (see col. 5 lines 25-31 and col. 6 lines 14-16) corresponding to a first text identifier (text identifier is regarded as command code in col. 2 lines 49-55 and col. 3 lines 48-52), the monitor configured to display the text entered on a flight plan entry field on the display (see col. 4 lines 34-37 and lines 48-52) and the computer means configured to compare the entered character to data stored in each data source (data source corresponds to data from the keyboard and data from the storage) (see col. 2 lines 36-41 and col. 5 lines 18-26);

Barnett fails to disclose identifying a likely text identifier that is **geographically closest to the aircraft's flight plan**.

Nakhla discloses an alternate destination predictor for aircraft, wherein a likely text identifier that is **geographically closest to the aircraft's flight plan** is identified in col. 5 lines 16-24 and col. 6 lines 57-63.

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's nearest airport location identification into Barnett's alphanumerical display and data entry system so that a pilot can make a better informed decision regarding a route change in case of an emergency, thereby minimizing the probability of crashed due to miscalculated landing distance versus remaining fuel.

**In regard to claim 18**, Barnett discloses that the monitor is configured to display the text entered on a flight plan entry field on the display (see col. 4 lines 34-37 and lines 48-52) and the computer means configured to compare the entered character to data stored in each data source (data source corresponds to data from the keyboard and data from the storage) (see col. 2 lines 36-41 and col. 5 lines 18-26).

Barnett fails to specifically disclose that the text entry means is configured to accept at least one entered alphanumeric text character corresponding to additional text identifiers. Barnett also fail to disclose identifying **additional likely text identifiers** that are geographically closest to the aircraft's flight plan. Barnett also fails to disclose the modification of the aircraft's flight plan corresponding to the text identifier if acceptable to the aircraft operator.

Nakhla discloses an alternate destination predictor for aircraft, having a text entry means configured to accept at least one entered alphanumeric text character corresponding to additional text identifiers (see col. 5 lines 17-29).

Nakhla also discloses identifying additional likely text identifiers that are geographically closest to the aircraft's flight plan in col. 5 lines 16-24 and col. 6 lines 57-63). Nakhla further discloses that the modification of the aircraft's flight plan corresponding to the text identifier if acceptable to the aircraft operator (see col. 2 lines 17-27; lines 36-41).

At the time of the invention, it would have been obvious to one of the ordinary skill in the art to implement Nakhla's nearest airport location identification into Barnett's alphanumeric display and data entry method so that a pilot can make a better informed decision regarding a route change in case of an emergency, thereby minimizing the probability of crashes due to miscalculated landing distance versus remaining fuel. Furthermore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to implement Nakhla's flight management modification with Barnett's test entry method because it would facilitate the pilot in the decision making process in case of an emergency by providing a list of alternate destinations at which the pilot can land the airplane.

***Allowable Subject Matter***

4. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 20-27 and 28-29 are allowable.

**In regard to claims 20-27**, none of the above-cited references either singularly or in combination teach or fairly disclose:

“removing active runway information from the runway list and sorting and listing all remaining runways by proximity to the active runway on a flight plan entry field on the display”.

**In regard to claims 28 and 29**, none of the above-cited references either singularly or in combination teach or fairly disclose:

“if the intercept point is within the new runway’s final approach, allowing the computer means to control an output device to display an error message;

if the intercept point is not within the new runways final approach fix, allowing the computer means to control the monitor to display an error message;

is the intercept point is located within the new runway’s final approach fix, allowing the computer means to obtain a new leg corresponding to the new alternate approach and to delete waypoints along the leg which the aircraft has passed;

allowing the computer means to calculate a proposed turn direction and intercept angle for the aircraft to achieve the new intercept point in the new alternate approach and controlling the monitor to display the new alternate approach”.

### ***Response to Arguments***

6. Applicant's argued the added features “ upon comparing an entered character to data stored in each data source, that each likely text identifier is automatically completed on the display” not being disclosed by either of the references.

Examiner respectfully, theses features are taught by Barnett in col. 2 lines 36-45.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marthe Y Marc-Coleman whose telephone number is (703) 305-4970. The examiner can normally be reached on Monday-Thursday from 9:30 AM - 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A Cuchlinski can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Patent Examiner  
*Marthe Y. Marc-Coleman*  
Marthe Marc-Coleman

November 18, 2003